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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,952	04/15/2004	Brett Masters	2003-IP-009957 U1 USA	2280

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EXAMINER

WAKS, JOSEPH

ART UNIT PAPER NUMBER

2834

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/826,952	Applicant(s) MASTERS ET AL.	
	Examiner Joseph Waks	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-3, 7-9, 11-14 and 19-60 is/are rejected.
- 7) ☒ Claim(s) 4-6, 10 and 15-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0704,0205,0905,604</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 13, 21-26, 29-35, and 51-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Kolm et al. (US 4,387,318).

Kolm et al. disclose invention as claimed: an elongated arm 18, a vortex shedding device 16, an electrical power generator 14 which generates electrical power in response to displacement of the arm, and an elastic support 12 which supports the arm against alternating lift forces produced by vortices shed by the vortex shedding device.

For the limitations of claims 21-25, 29-33 see Figures 6-8.

For the limitations of claim 26 see Figure 4.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8, 14, 36-50 and 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolm et al. (US 4,387,318).

Kolm et al. disclose a vibrating assembly 10 including a vortex shedding device 12 which sheds vortices in response to fluid flow across the vibrating assembly and a generator 14 which generates electrical power in response to vibration of the vibrating assembly, wherein the vortex shedding device sheds the vortices at a frequency that can be adjusted for particular working conditions by selecting the require vane 16 size or changing the stiffness of the element 14a (Re. Column 3, lines 55-68 and column 4, lines 1-9), the elastic support 18. However, Kolm et al. do not disclose the vortex shedding device shedding the vortices at a frequency that is substantially equal to the resonant frequency of the vibrating assembly.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the vibrating assembly as taught by Kolm et al. and to provide the vortex shedding device shedding the vortices at a frequency that is substantially equal to the resonant frequency of the vibrating assembly for the purpose of providing the optimum power generated at particular working conditions, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. Claims 7, 9, 11, 19, 20, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolm et al. (US 4,387,318) as applied to claim 1 above and further in view of Tubel et al. (US 5,839,508).

Kolm et al. disclose the vibrating assembly essentially as claimed. However, Kolm et al. do not disclose the generator including at least one magnet displaced relative to a coil in response to vibration of the vibrating assembly.

Tubel et al. disclose in Figure 7A the generator including at least one magnet 100 displaced relative to a coil 112 in response to vibration of the vibrating assembly 102, for the purpose of generating electric power for use in a wellbore or well.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the vibrating assembly as taught by Kolm et al. and to provide the generator including at least one magnet displaced relative to a coil in response to vibration of the vibrating assembly as taught by Tubel et al. for the purpose of generating electric power for use in a wellbore or well.

Re claim 20, the combined assembly discloses the claimed invention except for the generator including at least two of the magnets and at least two of the coils, at least one of the magnets and at least one of the coils being positioned on each of opposite lateral sides of the arm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the generator with at least two of the magnets and at least two of the coils on opposite lateral sides of the arm for the purpose of increasing the generator power output, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

***Allowable Subject Matter***

6. Claims 4-6, 10, 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The feature of the generator including an electromagnetically active material in which strain is induced in response to vibration of the vibrating assembly, in combination with the other limitations present, is neither disclosed nor taught by the prior art of record.

Claims 5 and 6 would be allowed as being dependent on claim 4.

Claims 16-18 would be allowed as being dependent on claim 15.

### ***Prior Art***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (571) 272-2037. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Waks', is positioned to the left of the printed name.

Joseph Waks  
Primary Examiner  
Art Unit 2834

12/1/05